X11600.ST25.txt
SEQUENCE LISTING

<110> Becker, Gerald

Hale, John

Heath, William

Johnstone, Edward

Little, Sheila

Tu, Yuan

Yeh, Wu-Kuang

Yin, Tinggui

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<130> X-11600

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<170> PatentIn version 3.1

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gcc aac cgc acg gcc ctc ttc ccg gac ctg ctg gca cag ggc aac gca       339
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tcc ctg agg ctg cag cgc gtg cgt gtg gcg gac gag ggc agc ttc acc       387
Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly Ser Phe Thr
              110               115               120

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Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val Ser Leu Gln
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ctg act ggc aac gtg acc acg tcg cag atg gcc aac gag cag ggc ttg       627
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ttt gat gtg cac agc atc ctg cgg gtg gtg ctg ggt gca aat ggc acc       675
Phe Asp Val His Ser Ile Leu Arg Val Val Leu Gly Ala Asn Gly Thr
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tac agc tgc ctg gtg cgc aac ccc gtg ctg cag cag gat gcg cac agc       723
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          acc gaa ggc cgg gac cag ggc agc gcc tat gcc aac cgc acg gcc ctc        963
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          gat ttc ggc agc gct gcc gtc agc ctg cag gtg gcc gct ccc tac tcg       1107
          Asp Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser
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          acg gtg acc atc acg tgc tcc agc tac cgg ggc tac cct gag gct gag       1203
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          Val Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr
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          cag cct atg aca ttc ccc cca gag gcc ctg tgg gtg acc gtg ggg ctg       1443
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Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn

50   55   60

Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala
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Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe
            85   90   95

Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
        100   105   110

Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp
        115   120   125

Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
    130   135   140

Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr
145   150   155   160

Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val
            165   170   175

Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr
            180   185   190

Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Ile Leu
        195   200   205

Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn
    210   215   220

Pro Val Leu Gln Gln Asp Ala His Ser Ser Val Thr Ile Thr Pro Gln
225   230   235   240

Arg Ser Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val
            245   250   255

Val Ala Leu Val Gly Thr Asp Ala Thr Leu Arg Cys Ser Phe Ser Pro
            260   265   270

Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr
        275   280   285

Asp Thr Lys Gln Leu Val His Ser Phe Thr Glu Gly Arg Asp Gln Gly
    290   295   300

Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln

Page 9

305   310   315   320

Gly Asn Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly
                325   330   335

Ser Phe Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val
                340   345   350

Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu
                355   360   365

Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser
        370   375   380

Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln
385   390   395   400

Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu
                405   410   415

Gln Gly Leu Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
                420   425   430

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp
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Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro Met Thr Phe Pro Pro
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Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val Cys Leu Ile Ala Leu
465   470   475   480

Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys Ile Lys Gln Ser Cys
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Glu Glu Glu Asn Ala Gly Ala Glu Asp Gln Asp Gly Glu Gly Glu Gly
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Asp Gly Gln Glu Ile Ala
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                           1   5

atg ggt gtg cat gtg ggt gca gcc ctg gga gca ctg tgg ttc tgc ctc   99
Met Gly Val His Val Gly Ala Ala Leu Gly Ala Leu Trp Phe Cys Leu
10   15   20   25

aca gga gcc ctg gag gtc cag gtc cct gaa gac cca gtg gtg gca ctg   147
Thr Gly Ala Leu Glu Val Gln Val Pro Glu Asp Pro Val Val Ala Leu
                30   35   40

gtg ggc acc gat gcc acc ctg tgc tgc tcc ttc tcc cct gag cct ggc   195
Val Gly Thr Asp Ala Thr Leu Cys Cys Ser Phe Ser Pro Glu Pro Gly
                45   50   55

ttc agc ctg gca cag ctc aac ctc atc tgg cag ctg aca gat acc aaa   243
Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys
            60   65   70

cag ctg gtg cac agc ttt gct gag ggc cag gac cag ggc agc gcc tat   291
Gln Leu Val His Ser Phe Ala Glu Gly Gln Asp Gln Gly Ser Ala Tyr
        75   80   85

gcc aac cgc acg gcc ctc ttc ccg gac ctg ctg gca cag ggc aac gca   339
Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln Gly Asn Ala
90   95   100   105

tcc ctg agg ctg cag cgc gtg cgt gtg gcg gac gag ggc agc ttc acc   387
Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly Ser Phe Thr
                110   115   120

tgc ttc gtg agc atc cgg gat ttc ggc agc gct gcc gtc agc ctg cag   435
Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val Ser Leu Gln
            125   130   135

gtg gcc gct ccc tac tcg aag ccc agc atg acc ctg gag ccc aac aag   483
Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu Pro Asn Lys

gac ctg cgg cca ggg gac acg gtg acc atc acg tgc tcc agc tac cag   531
Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser Ser Tyr Gln
155   160   . 165

ggc tac cct gag gct gag gtg ttc tgg cag gat ggg cag ggt gtg ccc   579
Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln Gly Val Pro
170   175   180   185

ctg act ggc aac gtg acc acg tcg cag atg gcc aac gag cag ggc ttg   627
Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu Gln Gly Leu
190   195   200

ttt gat gtg cac agc atc ctg cgg gtg gtg ctg ggt gca aat ggc acc   675
Phe Asp Val His Ser Ile Leu Arg Val Val Leu Gly Ala Asn Gly Thr
205   210   215

tac agc tgc ctg gtg cgc aac ccc gtg ctg cag cag gat gcg cac agc   723
Tyr Ser Cys Leu Val Arg Asn Pro Val Leu Gln Gln Asp Ala His Ser
220   225   230

tct gtc acc atc aca ccc cag aga agc ccc aca gga gcc gtg gag gtc   771
Ser Val Thr Ile Thr Pro Gln Arg Ser Pro Thr Gly Ala Val Glu Val
235   240   245

cag gtc cct gag gac ccg gtg gtg gcc cta gtg ggc acc gat gcc acc   819
Gln Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr
250   255   260   265

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aac ctc atc tgg cag ctg aca gac acc aaa cag ctg gtg cac agt ttc   915
Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe
285   290   295

acc gaa ggc cgg gac cag ggc agc gcc tat gcc aac cgc acg gcc ctc   963
Thr Glu Gly Arg Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu
300   305   310

ttc ccg gac ctg ctg gca caa ggc aat gca tcc ctg agg ctg cag cgc   1011
Phe Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg
315   320   325

gtg cgt gtg gcg gac gag ggc agc ttc acc tgc ttc gtg agc atc cgg   1059
Val Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg
330   335   340   345

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aag ccc agc atg acc ctg gag ccc aac aag gac ctg cgg cca ggg gac   1155
Lys Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp
365   370   375

acg gtg acc atc acg tgc tcc agc tac cgg ggc tac cct gag gct gag   1203
Thr Val Thr Ile Thr Cys Ser Ser Tyr Arg Gly Tyr Pro Glu Ala Glu
380   385   390

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410                     415                      420                 425

ctg cgg gtg gtg ctg ggt gcg aat ggc acc tac agc tgc ctg gtg cgc    1347
Leu Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg
                        430                      435             440

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Asn Pro Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly
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Gln Pro Met Thr Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu
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tct gtc tgt ctc att gca ctg ctg gtg gcc ctg gct ttc gtg tgc tgg    1491
Ser Val Cys Leu Ile Ala Leu Leu Val Ala Leu Ala Phe Val Cys Trp
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Gln Asp Gly Glu Gly Glu Gly Ser Lys Thr Ala Leu Gln Pro Leu Lys
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cac tct gac agc aaa gaa gat gat gga caa gaa ata gcc tga            1629
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Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala
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Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe
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Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
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Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp
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Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
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Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr
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Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val
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Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr
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Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Ile Leu
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Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn
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Pro Val Leu Gln Gln Asp Ala His Ser Ser Val Thr Ile Thr Pro Gln
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Arg Ser Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val
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Val Ala Leu Val Gly Thr Asp Ala Thr Leu Arg Cys Ser Phe Ser Pro
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Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr
        275   280   285

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Asp Thr Lys Gln Leu Val His Ser Phe Thr Glu Gly Arg Asp Gln Gly
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Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln
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Gly Asn Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly
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Ser Phe Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val
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Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu
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Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser
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Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln
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Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu
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Gln Gly Leu Phe Asp Val His Ser Val Leu Arg Val Val Leu Gly Ala
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Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro Val Leu Gln Gln Asp
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Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro Met Thr Phe Pro Pro
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Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val Cys Leu Ile Ala Leu
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Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys Ile Lys Gln Ser Cys
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Glu Glu Glu Asn Ala Gly Ala Glu Asp Gln Asp Gly Glu Gly Glu Gly
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